



Eco-Friendly Building Materials: Recycled Waste and Sustainable Design

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Message from the Guest Editors

Conventional construction depends on the extraction of huge quantities of natural resources and the utilization of high-carbon-emitting materials, which adversely impact the natural environment. On the other side, the production of vast volumes of waste are discarded in landfill sites, several of which stem from the building and construction industry. Hence, it is critical that the building and construction sector adopts environmentally sustainable practices to mitigate these environmental impacts and climate change.

Increasingly, waste streams are being viewed as a valuable resource that can be utilized for the development of novel and sustainable building materials. Additionally, there is a growing demand for low-carbon materials resulting in great innovations in concrete and steel technology. We are pleased to announce this Special Issue of *Buildings*, which aims to further enrich the body of knowledge on environmentally sustainable building materials and highlight innovative approaches to material development. This Special Issue will focus on the performance and production of materials that incorporate recycled waste content and/or achieve substantial emission reductions.





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Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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